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ABSTRACT

The report describes Wisconsin's information retrieval system with remote, on-line computer access to nearly 200,000 educational documents. Briefly outlined are the operations and indexing of materials for the computer program, documents of the Educational Resources Information Center (ERIC), file access, training sessions, and remote location access. Also listed are the locations of Wisconsin libraries containing ERIC microfiche collections. Response to the project of installing terminals for a four-month trial period in each school (March-May, 1974) has been very favorable. There is no doubt that information retrieval systems using computers will become essential as the amount of available information sources continues to grow rapidly. (NH)

INFORMATION RETRIEVAL SYSTEM
DESCRIPTIVE REPORT

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CENTER FOR STUDIES IN
VOCATIONAL & TECHNICAL EDUCATION
UNIVERSITY OF WISCONSIN-MADISON

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Roger H. Lambert, Ph.D., Project Director
Richard M. Schwartz, Project Coordinator

CENTER FOR STUDIES IN VOCATIONAL AND TECHNICAL EDUCATION
UNIVERSITY OF WISCONSIN-MADISON

321 Education Building
1000 Bascom Mall
Madison, Wisconsin 53706
608-263-3696

The research reported herein was performed pursuant to a grant or contract with the Wisconsin Board of Vocational, Technical and Adult Education, partially reimbursed from an allocation of Federal funds from the U. S. Office of Education, U. S. Department of Health, Education and Welfare. Contractors undertaking such projects under Government sponsorship are encouraged to express freely their professional judgment in the conduct of the project. Points of view or opinions stated do not, therefore, necessarily represent official State Board or U. S. Office of Education position or policy.

The Information Retrieval System

Remote, on-line computer access for document searches and information retrieval utilizing the RIE, ARM, AIM and CIJE document files is in operation along with an in-service training program for staff in eight of the sixteen Wisconsin Postsecondary, Vocational, Technical and Adult Education districts. The schools have each received a CRT terminal for use and appropriate training has been supplied as a result of a project developed by the Center for Studies in Vocational and Technical Education, University of Wisconsin-Madison. Funds for the project are being provided by the Wisconsin Board of Vocational, Technical and Adult Education. The Wisconsin Department of Public Instruction and the University of Wisconsin-Madison Academic Computing Center are also cooperating with the project. The major thrust of the program is to provide immediate feedback to the user, no matter where he is located. By working on-line, the user is given the results within seconds of conducting his search. Titles, author names and complete bibliographic citations of nearly 200,000 educational documents are literally at his fingertips.

The Materials on File

The types of materials contained in the ERIC files are many and varied. Pertinent to the field of education, there are significant documents for all levels of education, as well as in sixteen specialized areas, including career education, handicapped and gifted children, higher education, evaluation and measurement, information resources, and junior colleges. There are reports of conference proceedings, bibliographies, professional papers, innovative programs, and curriculum-related materials, all readily available to the ERIC user.

The Computer Program

The computer program being used in this information retrieval project is the WISE-ONE system, created by Tom Olson, with Donald N. McIsaac and Dennis W. Spuck of the University of Wisconsin-Madison School of Education, and Roy D. Tally of the Wisconsin Department of Public Instruction. The WISE-ONE system provides access to document and abstract files produced by the ERIC (Educational Resource Information Center) program of the National Institute of Education. The WISE-ONE program is used to search through the ERIC document files and retrieve all those documents which meet the user's needs.

The ERIC Documents

The ERIC system center collects, abstracts, classifies and catalogs this information and publishes resumes of all reports in the monthly periodicals of Research in Education (RIE) and Current Index to Journals in Education (CIJE). In addition to these periodicals, ERIC produces copies of RIE abstracts and CIJE annotations in machine-readable form through a subcontractor. The subcontractor, Leasco Information Systems of Bethesda, Maryland, provides the ERIC files on computer tape to subscribers on a monthly, quarterly or annual update basis. In addition to the RIE and CIJE data bases, the AIM (Abstracts of Instructional Materials in Vocational & Technical Education) and ARM (Abstracts of Research Materials in Vocational & Technical Education) document files are available as part of this project.

File Access

Documents catalogued in the ERIC files are indexed by subject-matter descriptors, identifiers and author names. Descriptors characterize the

substantive content of the report and are themselves indexed in the Thesaurus of ERIC Descriptors. Additional terms not listed in the Thesaurus, but which are useful in describing a particular document are called Identifiers. Catalogued information is also addressable by the last name of any author associated with it. WISE-ONE is written to search for documents catalogued under any of these indices and will yield the ERIC Accession Number, Author and Title associated with the selected documents. In the case of journal files, the journal name, volume and page are also displayed.

Training Sessions

Individual training sessions have been held for the key operators selected by each district. Additional campus-wide in-service sessions have been held to train the staff members in utilization of the remote access capability. Overhead projections describing the ERIC system and detailing search strategies were presented, along with a demonstration of the computer terminal. Sample searches were performed to show the immediacy of the results.

Remote Location Access

Access to the data bases is accomplished through the use of computer terminals located at the Technical Institutes throughout the state, linked via telephone lines to the UNIVAC 1110 Computer at the University of Wisconsin-Madison Academic Computing Center. The time needed to search through the files is usually less than 10 seconds, compared with hours or days which would be needed to perform a manual search. The on-line access provides an instant display of the search results, and enables the local user to immediately redirect the search program if he determines that the materials identified are not appropriate to his need, are too

numerous, or are too narrow in scope. If the identified materials are appropriate, he can secure the corresponding microfiche copy or he can ask the computer to send him a printout of the abstracts which will be mailed the next day. Displays of title, author, and ERIC accession number are available on the terminal screen; these may also be printed on paper if a printer is attached to the terminal, or they may be printed at a remote site and mailed to the user.

Location of Materials

ED documents in the ERIC library are available in their entirety from the ERIC Document Reproduction Service, P. O. Drawer O, Bethesda, Maryland, 20014. Libraries in Wisconsin which currently maintain ERIC microfiche collections are:

Wisconsin Board of Vocational, Technical and Adult Education, 4802 Sheboygan Avenue, 7th Floor, Madison 53705, 608-266-3705.

Department of Public Instruction Professional Library, 126 Langdon Street, Madison 53702, 608-266-2529.

Robert L. Pierce Library, UW-Stout, Menomonie 54751, 715-235-5541.

Instructional Materials Center, Education Sciences Building, UW-Madison 53706, 608-262-3580.

UW-Milwaukee Library, 2500 E. Kenwood Blvd., Milwaukee 53211, 414-228-4785.

UW-Parkside Library, Public Services Division, Kenosha 53140, 414-553-2360.

Waukesha County Technical Institute Library, 800 Main Street, Pewaukee 53702, 414-691-3200.

William D. McIntyre Library, UW-Eau Claire 54701, 715-836-3715.

Forrest R. Polk Library, UW-Oshkosh 54901, 414-235-6220.

Chalmer Davee Library, UW-River Falls 54022, 715-425-6701.

Harold Anderson Library, UW-Whitewater 53190, 414-472-4671.

The State Board Office has the capability of reproducing microfiche copies, which are available at the cost of 25¢ per microfiche card through Mr. Roland Krogstad. A microfiche card is a 4 by 6 inch sheet of microfilm on which up to seventy pages of text are reproduced; a microfiche reader is required.

Results

The terminals were installed between March 1 and May 1, 1974 for a four-month trial period in each school. Preliminary usage figures show a wide range of use reflecting the staggered installation dates. Most of the searches to date have been done in response to requests by school faculty and administrative staff members. Forms were designed to aid the requestor and the searcher in creating the most effective search strategies. Response to the project has been very favorable, and use has grown considerably throughout the project. The number of uses per month is listed below, where the numbers refer to the number of times a search was made in any of the three data base files - RIE, CIJE, or AIM/ARM.

March - 70
April - 156
May - 168
June - 81 (through June 7)

Conclusions

There is no doubt that information retrieval systems using computers will become essential as the amount of available information sources continues to grow rapidly. With remote on-line access possible through the use of computer terminals, any interested person will have vast resources instantly available to him. The hardware needed is here; with training in its operation, the local user will find he has an inexpensive

and rapid method of obtaining information he needs, no matter where he is located.

Future Directions

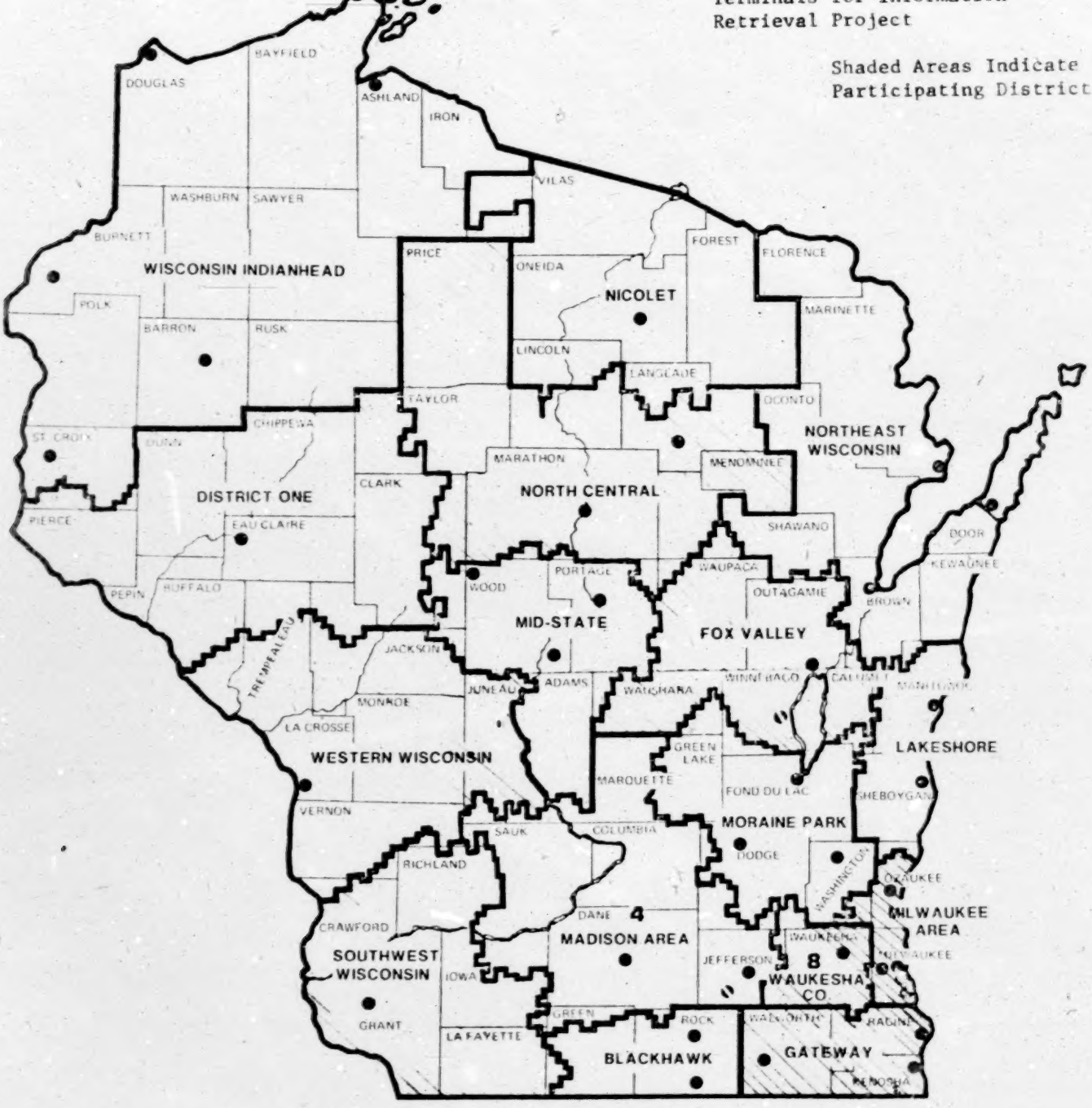
It is hoped that expansion of the present project will allow for each district to establish a regional center for information dissemination. The center would then provide access to the material for local public school personnel as well as for persons from other interested agencies. The project is envisioned as the catalyst to initiate the computer search system and to carry on a coordinated dissemination program between the University, the State Board, the Technical Institutes, and the Department of Public Instruction. The addition of more data bases is planned, along with the development of more sophisticated search techniques, in providing the most information in the shortest time to the local user.

Summary

Computer terminals for use in information retrieval utilizing the document files of the Educational Resource Information Centers (ERIC) have been installed in eight of the sixteen local vocational districts. Training sessions have been held, along with in-service demonstrations of the use of the ERIC system for local district personnel. Results to date show a generally favorable acceptance of the system, as well as a growing use of the computer terminals in obtaining information for curriculum development and for research. Future expansion of the existing system is envisioned, providing access to more data bases and for more of the local staff personnel throughout all sixteen Wisconsin Vocational Districts.

Terminals for Information Retrieval Project

Shaded Areas Indicate Participating Districts



Terminal Operators

State Board - Sherman Ansell
Milwaukee - Margaret Lutovsky
LaCrosse - Harry Hutchison
Fennimore - Patricia Payson
Appleton - Betty Earle
Center for Studies in Vocational and Technical Education - Richard Schwartz
Eau Claire - Roxanne Graf
Wausau - Allen Henricks
Waukesha - Ted Laabs
Kenosha - Pam Anderson
Racine - Barb Greene

CENTER FOR STUDIES IN VOCATIONAL AND TECHNICAL EDUCATION, UNIVERSITY OF WISCONSIN-MADISON

The Center for Studies in Vocational and Technical Education at the University of Wisconsin-Madison was reorganized with the support of the Wisconsin Board of Vocational, Technical and Adult Education within the School of Education in 1971. The function of the Center is to serve the State of Wisconsin in a unique way by bringing the resources of the University to bear on identified problems in the delivery of vocational and manpower programs--vocational education, technical education, adult education, career education, manpower training--to citizens of all ages in all communities of the State. The Center focuses upon the delivery of services including analyses of need, target groups served, institutional organization, instructional and curriculum methodology and content, labor market needs, manpower policy, and other appropriate factors. To the extent that these goals are enhanced and the foci of problems widened to encompass regional and national concerns, the Center engages in studies beyond the boundaries of the State.

Merle Strong, Director
Roger Lambert, Associate Director

For further information on this or other Center activities, contact:

Center for Studies in Vocational and Technical Education
321 Education Building
1000 Bascom Mall
Madison, Wisconsin 53706

608-263-3696